

SEQUENCE LISTING¹

<110> Visible Genetics Inc.
Shipman, Robert

<120> Method and Kit for the Characterization of
Antibiotic-Resistance Mutations in Mycobacterium
tuberculosis

<130> VGEN.P-055-WO

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<150> 60/111,794

<151> 1998-12-11

<160> 50

<170> PatentIn Ver. 2.1

<210> 1

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<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> rpoB-F amplification primer

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20

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<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> rpoB-R amplification primer

<400> 2

tacggcggtt cgaatgaacc

20

<210> 3
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> rpoB-5s sequencing primer

<400> 3
tacggtcggc gagctgatcc 20

<210> 4
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> rpoB-3s sequencing primer

<400> 4
tacggcggtt cgatgaacct 20

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<211> 480
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> rpoB (rifampin resistance)

<400> 5
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aaaaccagat cgggtcggc atgtcgcgga tggagcgggt ggtccgggag cggatgacca 120
cccaggacgt ggaggcgatc acaccgcaga cgttgatcaa catccggccg gtggtcgccg 180
cgatcaagga gttcttcggc accagccagc tgagccaatt catggaccag aacaaccgc 240
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tcgaaacccc tgaggggccc aacatcggtc tgatcggtc gctgtcggtg tacgcgcggg 420
tcaaccggtt cgggttcacg gaaacgccgt accgcaaggt ggtcgacggc gtggttagcg 480

<210> 6
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<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> katG-F amplification primer

<400> 6
atggggctga tctacgtgaa 20

<210> 7
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> katG-R amplification primer

<400> 7
ggtgtccag ccagcgacgc 20

<210> 8
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> katG-5s sequencing primer

<400> 8
atggggctga tctacgtgaa 20

<210> 9
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> katG-3s sequencing primer

<400> 9
ggtgtccag ccagcgacgc 20

<210> 10
<211> 660
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> katG (isoniazid resistance)

<400> 10
gctcggcgat gagcggtaca gcggttaagcg ggatctggag aaccgctgg ccgcggtgca 60
gatggggctg atctacgtga acccgaggagg gccgaacggc aaccgggacc ccatggccgc 120
ggcggtcgac attcgcgaga cgtttcggcg catggccatg aacgacgtcg aaacagcggc 180
gctgatcgtc ggcggtcaca ctttcggtaa gacctatggc gccggcccg ccgatctggt 240
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cccacgaaa tgggacaaca gtttctcga gatcctgtac ggctacgagt gggagctgac 420
gaagagccct gctggcgctt ggcaatacac cgccaaggac ggcgccggtg ccggcaccat 480
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gcgggtggat ccgatctatg agcggatcac gcgtcgctgg ctggaacacc ccgaggaatt 600
ggccgacgag ttcgccaagg cctggtacaa gctgatccac cgagacatgg gtcccgttgc 660

<210> 11
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<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> PR-F amplification primer

<400> 11
accactgctt tgccgccacc 20

<210> 12
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> PR-R amplification primer

<400> 12
ccgatgagag cggtagctg 20

<210> 13
<211> 20
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<213> Mycobacterium tuberculosis

<220>
<223> PR-5s sequencing primer

<400> 13
accactgctt tgccgccacc 20

<210> 14
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> PR-3s sequencing primer

<400> 14
ccgatgagag cggtagctg 20

<210> 15
<211> 420
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> oxyR-ahpC intergenic region (PR)

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tcatatcgag aatgcttgcg gcactgctga accactgctt tgccgccacc gcggcgaacg 120
cgcgaagccc ggccacggcc ggctagcacc tcttggcggc gatgccgata aatatggtgt 180
gatatatcac ctttgctga cagcgacttc acggcacgat ggaatgtcg aaccaaagc 240
attgtccgct ttgatgatga ggagagtcac gccactgcta accattggcg atcaattccc 300
cgctaccag ctcaccgctc tcacggcgcg tgacctgtcc aaggctgacg ccaagcagcc 360
cggcgactac tcaccacta tcaccagtga cgaacaccca ggcaagtggc gggtggtgtt 420

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<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> fabG-F amplification primer

<400> 16

cctcgctgcc cagaaaggga

20

<210> 17

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> fabG-R amplification primer

<400> 17

atcccccggt ttctccggt

20

<210> 18

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> fabG-5s sequencing primer

<400> 18

cctcgctgcc cagaaaggga

20

<210> 19

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> fabG-3s sequencing primer

<400> 19

atcccccggt ttctccggt

20

<210> 20
<211> 360
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> fabG (isoniazid resistance)

<400> 20
agcgcgacat acctgctgcg caattcgtag ggcgtcaata caccgcagc cagggcctcg 60
ctgcccagaa agggatccgt catggtcgaa gtgtgctgag tcacaccgac aaacgtcacg 120
agcgtaaccc cagtgcgaaa gttcccgcg gaaatcgag ccacgttacg ctctggaca 180
taccgatttc ggcccggccg cggcgagacg ataggttgc ggggtgactg ccacagccac 240
tgaagggggc aaacccccat tcgtatcccg ttcagtcctg gttaccggag gaaaccgggg 300
gatcgggctg gcgatcgac agcggctggc tgccgacggc cacaaggtgg ccgtcaccca 360

<210> 21
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> s12-F amplification primer

<400> 21
cggtagatgc caaccatcca 20

<210> 22
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> s12-R amplification primer

<400> 22
gcatcagccc ttctccttct 20

<210> 23
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>

<223> s12-5s sequencing primer

<400> 23

cggtagatgc caaccatcca

20

<210> 24

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> s12-3s sequencing primer

<400> 24

gcatcagccc ttctccttct

20

<210> 25

<211> 420

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> rpsL/s12 (streptomycin resistance)

<400> 25

cggtagatgc caaccatcca gcagctggtc cgcaagggtc gtcgggacaa gatcagtaag 60
gtcaagaccg cggctctgaa gggcagcccg cagcgtcgtg gtgtatgcac ccgcgtgtac 120
accaccactc cgaagaagcc gaactcggcg ctctggaagg ttgcccgcgt gaagttgacg 180
agtcaggctc aggtcacggc gtacattccc ggcgagggcc acaacctgca ggagcactcg 240
atggtgctgg tgcgcggcgg ccgggtgaag gacctgcctg gtgtgcgcta caagatcatc 300
cgcggttcgc tggatagca ggggtgtcaag aaccgcaaac aggcacgcag ccgttacggc 360
gctaagaagg agaagggtg atgccacgca aggggcccgc gcccaagcgt ccgttggtca 420

<210> 26

<211> 21

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 16S-F amplification primer

<400> 26

ggtgatctgc cctgcacttc g

21

<210> 27

<211> 21

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 16S-R amplification primer

<400> 27

cgtcacccca ccaacaagct g

21

<210> 28

<211> 21

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 16S-5s sequencing primer

<400> 28

ggtgatctgc cctgcacttc g

21

<210> 29

<211> 21

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 16S-3s sequencing primer

<400> 29

cgtcacccca ccaacaagct g

21

<210> 30

<211> 147

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 16S/rrs (streptomycin resistance)

<400> 30

cgtgggtgat ctgccctgca ctccgggata agcctgggaa actgggtcta ataccggata 60
ggaccacggg atgcatgtct tgtgggggaa agcgctttag cgggtgtgga tgagcccgcg 120
gcctatcagc ttgttggtgg ggtgacg 147

<210> 31

<211> 21

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> embB-F amplification primer

<400> 31

cggcaagctg gcgcaccttc a

21

<210> 32

<211> 21

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> embB-R amplification primer

<400> 32

agccagcaca ctgcccggc g

21

<210> 33

<211> 21

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> embB-5s sequencing primer

<400> 33

cggcaagctg gcgcaccttc a

21

<210> 34
<211> 21
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> embB-3s sequencing primer

<400> 34
agccagcaca ctagcccggc g

21

<210> 35
<211> 300
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> embB (ethambutol resistance)

<400> 35
cggcatgcgc cggctgattc cggcaagctg ggcacattc accctgaccg acgccgtggt 60
gatattcggc ttctgtctt ggcattcat cggcggaat tcgtcggacg acggctacat 120
cctgggcatg gcccgagtgc cggaccacgc cggctacatg tccaactatt tccgctggtt 180
cggcagcccg gaggatccct tcggctggta ttacaacctg ctggcgctga tgacctatgt 240
cagcgacgcc agtctgtgga tgcgcctgcc agacctggcc gccgggctag tgtgctggct 300

<210> 36
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>
<223> pncA-F amplification primer

<400> 36
atgcgggcgt tgatcatcgt

20

<210> 37
<211> 20
<212> DNA
<213> Mycobacterium tuberculosis

<220>

<223> pncA-F amplification primer

<400> 37

tcaggagctg caaaccaact

20

<210> 38

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> pncA-5s sequencing primer

<400> 38

atgcgggcgt tgatcatcgt

20

<210> 39

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> pncA-3s sequencing primer

<400> 39

tcaggagctg caaaccaact

20

<210> 40

<211> 561

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> pncA (pyrazinamide resistance)

<400> 40

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gtaaccgggtg gcgccgcgct ggcccgcgcc atcagcgact acctggccga agcggcggac 120
taccatcacg tcgtggcaac caaggacttc cacatcgacc cgggtgacca cttctccggc 180
acaccggact attctcgtc gtggccaccg cattgcgtca gcggtactcc cggcgcggac 240
ttccatccca gtctggacac gtcggcaatc gaggcggtgt tctacaaggg tgcctacacc 300

ggagcgtaca gcggcttcga aggagtcgac gagaacggca cgccactgct gaattggctg 360
cggcaacgcg gcgtcgatga ggtcgatgtg gtcgggtattg ccaccgatca ttgtgtgcgc 420
cagacggccg aggacgcggt acgcaatggc ttggccacca ggggtgctggt ggacctgaca 480
gcgggtgtgt cggccgatac caccgtcgcc gcgctggagg agatgcgcac cgccagcgtc 540
gagttggttt gcagctcctg a 561

<210> 41

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-F amplification primer

<400> 41

cagctacatc gactatgcga 20

<210> 42

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-R amplification primer

<400> 42

gggcttcggt gtacctcatc 20

<210> 43

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-5s sequencing primer

<400> 43

cagctacatc gactatgcga 20

<210> 44

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA-3s sequencing primer

<400> 44

gggcttcggt gtacctcatc

20

<210> 45

<211> 420

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> gyrA (fluoroquinilone/ciprofloxacin resistance)

<400> 45

cgaccggatc gaaccgggtg acatcgagca ggagatgcag cgcagctaca tcgactatgc 60
gatgagcgtg atcgtcggcc gcgcgctgcc ggaggtgcgc gacgggctca agcccgtgca 120
tcgccgggtg ctctatgcaa tgttcgattc cggttcgcgc cgggaccgca gccacgcca 180
gtcggccccg tcggttgccg agaccatggg caactaccac ccgcacggcg acgcgtcgat 240
ctacgacagc ctggtgcgca tggcccagcc ctggtcgctg cgctacccgc tgggtggacgg 300
ccagggcaac ttcggctcgc caggcaatga cccaccggcg gcgatgaggt acaccgaagc 360
ccggctgacc ccgttggcga tggagatgct gagggaaatc gacgaggaga cagtcgattt 420

<210> 46

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 23S-F amplification primer

<400> 46

cgaaattcct tgcgggtaa

20

<210> 47

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 23S-R amplification primer

<400> 47

gtattcaac aacgactcca

20

<210> 48

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 23S-5s sequencing primer

<400> 48

cgaaattcct tgtcgggtaa

20

<210> 49

<211> 20

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 23S-3s sequencing primer

<400> 49

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20

<210> 50

<211> 300

<212> DNA

<213> Mycobacterium tuberculosis

<220>

<223> 23S (macrolide/azithromycin resistance)

<400> 50

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taagttccga cctgcacgaa tggcgtaacg acttccaac tgtctcaacc atagactcgg 120
cgaaattgca ctacgagtaa agatgctcgt tacgcgcggc aggacgaaaa gaccccgga 180
ccttactac aacttggtat tgggttcgg tacggttgt gtaggatagg tgggagactt 240
tgaagcacag acgccagttt gtgtggagtc gttgtgaaa taccactctg atcgattgg 300